

NO DRAWINGS

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(54) IMPROVEMENTS IN OR RELATING TO FIREPROOFING COMPOSITIONS

(71) We, STAVOINDUSTRIA, NARODNY PODNIK of, No. 1/d, Leskova, Bratislava, Czechoslovakia, a Corporation organised and existing under the laws of Czechoslovakia, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 The present invention relates to fireproofing compositions.

According to the invention, there is provided a fireproofing composition comprising 1 to 47% by weight of inorganic fibres, 15 1 to 54% by weight of an expanded siliceous material, 1 to 65% by weight of a siliceous material having a particle size of less than 50μ , 2 to 75% by weight of a bonding agent (the percentages being based on the total dry weight of the ingredients), and water.

20 Preferably, the expanded siliceous material comprises expanded perlite, and the siliceous material having a particle size of less than 50μ comprises silicon dioxide and/or milled fused silica the substance known under the name "Siloxyd" being particularly suitable. Suitable bonding agents are water-based bonding agents or some organic bonding agents.

30 One example of a fireproofing composition in accordance with the invention comprises 10% by weight of inorganic, for instance basalt, fibres having a fibre length of between 2 and 30 mm, 28% by weight of expanded 35 perlite, 8% by weight of siliceous material having a particle size of less than 50μ , 6% by weight of milled fused silica having a particle size of less than 50μ , 48% by weight of cement, (the percentages by weight being based on the dry weight of the ingredients) a 40 small quantity of saponate foaming agent, and the required quantity of water, the aforesaid constituents being mixed together in order to obtain a plastic mortar mixture.

45 When mixed together with additional water

the plastic mortar is of paste-like consistency and can be applied onto a steel structure by means of a spray gun or by hand.

The fireproofing composition described has particularly favourable characteristics, especially as to its plasticity. The composition can be applied to a structure in one step, and affords good insulation against heat and noise.

In a fireproofing test, a layer 3 cm in thickness of the composition can protect a steel structure for at least 200 minutes, whereas a similar insulation made only of basalt fibre of the same thickness is effective only for 20 minutes, and a similar insulation made of expanded perlite is effective for a maximum of 110 minutes.

WHAT WE CLAIM IS:—

1. A fireproofing composition comprising 1 to 47% by weight of inorganic fibres, 1 to 54% by weight of an expanded siliceous material, 1 to 65% by weight of a siliceous material having a particle size of less than 50μ , 2 to 75% by weight of a bonding agent (the percentages by weight being based on the total dry weight of the ingredients), and water.

2. A composition according to claim 1 wherein said expanded siliceous material comprises expanded perlite.

3. A composition according to claim 1 or claim 2 wherein said siliceous material having a particle size of less than 50μ comprises silicon dioxide.

4. A fireproofing composition according to claim 1 substantially as hereinbefore described.

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